

storage cells.

However, Gauthier '986 fails to disclose or suggest a battery in which a plurality of tabs are connected to each of positive and negative electrodes. The Office Action apparently refers to the tab 53 shown in Fig. 1B and the electrical connection leads 54 shown in Fig. 1A. As shown in Fig. 1B of Gauthier '986, only one tab 53 is used for a cell 50, and that tab 53 is connected to a lead 57. In addition, Gauthier '986 is silent as to any criticality of the cross-sectional area of the tab.

The Office Action refers to Fig. 12 of Gauthier '986, and contains an assertion that Gauthier '986 discloses that the tabs have a total cross-sectional area so that the tabs may not fuse when at least 100 A current flows through the battery. Fig. 12 does not support such a position. In page 4 of the Office Action, line 4, there is a statement that Gauthier '986 discloses a cross-sectional area of 0.127 cm x 0.5 cm. The Office Action appears to be referring to Gauthier '986, col. 11, lines 15-38, which discloses a short-circuit protection device which includes an enclosure 132 which has eight fuses, in which a first contact of each fuse is connected in series with one of eight terminals 134 and a second contact of each fuse is connected to a common bus. Each of the terminals 134 has a contact 138 and a lead 136 which has the cross-sectional area cited in the Office Action. The leads 136 do not satisfy the features recited in the present claims with regard to the tabs. In addition, the leads 136 are not the same as the tab 53 in Fig. 1B of Gauthier '986 or the electrical connection leads 54 shown in Fig. 1A of Gauthier '986.

In the battery of claim 7 of the present invention, the tabs work as a current fuse. On the other hand, before the present invention, there was no suggestion in the art of using a tab as recited in claim 7 as a current fuse. As described in the present specification, page 6, lines 1-6, a current fuse has been utilized in various electric appliances, but has never been used, prior to the present invention, as a current cutoff mechanism to be disposed inside a lithium secondary

battery. The provision of a tab 5 which functions as a current fuse, according to the invention recited in claim 7, with which an existing safety device may be replaced or concurrently disposed, allows for an increase in battery safety.

Gauthier '986 proposes the use of a current fuse in Fig. 13, however, the fuses used for such a short-circuit protection device are housed in an enclosure 132 and are not depicted in Fig. 13. The thus arranged device is connected to each cell assembled as an array of cells via each of the contacts 138 when such a device is used practically. That is, the reference does not suggest the battery of the present invention, wherein tabs which function as a fuse are positioned within the battery.

On page 5 of the Office Action, the Office Action asserts that many of the claimed features would have been obvious through optimization. However, Gauthier '986 provides no disclosure which would have motivated one of skill in the art to attempt to optimize the cross-sectional areas of the leads 136, and Gauthier '986 fails to describe any basis on which the cross-sectional areas of the leads 136 could be optimized which would result in arriving at cross-sectional areas within the scope of the claims. Also, Gauthier '986 does not disclose or suggest tabs provided with a narrow portion, and Gauthier '986 provides no disclosure which would indicate that resistance should be less than 10 milli-ohms per a battery.

Reconsideration and withdrawal of these rejections are requested.

In view of the above, claims 1-27 are in condition for allowance.

If the Examiner believes that contact with Applicant's attorney would be advantageous toward the disposition of this case, the Examiner is herein requested to call Applicant's attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,  
BURR & BROWN

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Date

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